1-47 GENERAL NOTES

The General Notes for structure plans are intended to summarize the structural design criteria utilized in the design of the project. This block of information is often the only design information available to engineers tasked with rating or upgrading an existing structure. Nevertheless, brevity and conciseness is important in any text shown on engineering drawings. See *Bridge Design Details, Section 1*, for the location of the General Notes on *Project Plan Sheets*. Similar information will be found on the first page of a good set of structural design calculations.

An example of the General Notes for new bridges, widenings, and other structural upgrades is provided as Attachment I to this memo. It is the Designer's responsibility to edit the General Notes as appropriate for each project. The format of the General Notes is broken into three basic elements: Standards, Loads and Materials.

Standards

The AASHTO Standard Specifications or LRFD Bridge Design Specifications, as modified by Caltrans, are used for most typical structures. The actual specification utilized must be listed along with the specific edition, interims, and version number of the California amendments. The Caltrans *Seismic Design Criteria* is listed separately with the appropriate version number. Project-specific criteria are written and listed for segmental and other non-standard structures.

Loads

Loads are listed for clarity when not explicitly addressed in the AASHTO criteria. Future wearing surfaces are recommended by Caltrans, but not specified by AASHTO. These are therefore listed under dead loads. Any loads requirements for special formwork must also be addressed. Vehicular live loads have been amended by Caltrans, and therefore are listed. Seismic loads are defined in the Caltrans *Seismic Design Criteria* (SDC). The parameters to select an acceleration response spectra curve(s) must be listed. If the SDC is over-ridden by a project-specific report, the site-specific curve must be shown (reference MTD 20-5). A lateral spread load may also be required. Segmental bridges or any structure requiring a detailed estimate of force effects due to time-dependent material properties, shall list the creep/shrinkage model used along with the relative humidity and ambient temperature assumed.

Materials

Typically, the bar reinforcing yield strength, anticipated concrete strength,and modular ratio *n* are shown.If any components are structurally designed using working stress, the corresponding properties must be listed. Note that the units 'psi' are used for LFD, and 'ksi' for LRFD, in order to correspond with AASHTO. Prestressing steel properties are generally listed separately in the "Prestressing Notes", and referred to in the General Notes. All assumptions made for existing structures should be included.

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